

SEMICONDUCTOR PROCESSING WITH A REMOTE PLASMA SOURCE FOR SELF-CLEANING

Abstract of the Disclosure

A plasma CVD device includes a reaction chamber, a remote plasma discharge chamber that is provided remotely from the reaction chamber, and piping that links the reaction chamber and the remote plasma discharge chamber. The remote plasma discharge chamber activates cleaning gas by plasma discharge energy, and the activated cleaning gas is introduced into the inside of the reaction chamber through the piping and changes solid substances that adhere to the inside of the reaction chamber in consequence of film formation, to gaseous substances, thereby cleaning the inside of the reaction chamber. The device is characterized by at least one of the following: (a) the remote plasma discharge chamber generates active species using radio frequency oscillating output energy of a preselected frequency; (b) the piping is made of materials that are not corroded by the active species; or (c) the piping is provided with a through-flow type valve.

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